DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 24, 26 and 27 are rejected under 35 U.S.C. 102(e) as being anticipated by Seliger [US 6,668,667] in view DeReus [US 6,876,482].

Claim 24, Seliger discloses a cantilever MEMS switch [figure 1] comprising a tether [5] having at least two ends, wherein a first end of the tether is at least coupled to a substrate [1, via 6 and 12], and wherein, a second end of the tether is at least coupled to the a cantilever arm [342, figure 1].

Seliger fails to teach what the substrate is made of.

DeReus discloses that a substrate for a MEMS switch can be an insulator, a semiconductor, or conductive material [col. 7, line 61 to col. 8, line 6].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Seliger to include the semiconductor substrate of DeReus since Seliger does not specify a type of substrate and DeReus discloses that a non-conductive substrate is a well known type of substrate for use in a MEMS switch [col. 7, line 61 to col. 8, line 6].

Claim 26, Seliger discloses the cantilever MEMS switch of Claim 24, wherein the apparatus further comprises means for insulation [the gaps between 2 and 4 designated by distances h and d, figure 1], wherein the means for insulation at least provides a non-conductive barrier when the microscope switch is engaged.

Claim 27, Seliger discloses the cantilever MEMS switch of Claim 26, wherein the means for insulation further comprise air [figure 1].

Claims 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seliger [US 6,668,667] in view DeReus [US 6,876,482] as applied to claims 24, 26 and 27 above, and further in view of Zavracky [US 5,638,946].

Claims 28 and 29, Seliger in view DeReus discloses the claimed invention with the exception of the claimed composition of the means for insulation.

Zavracky teaches that an insulator [42] for a Mem switch can be made out of various materials; including Silicon Oxide (SiO2) and Silicon Nitride (Si3N4) [col. 6 lines 2-6].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Seliger in view DeReus to include an isolative component as shown by Zavracky in order to provide further protection against electrical contact between the cantilever arm and the substrate or base.

Allowable Subject Matter

The indicated allowability of claims 25 [which has been incorporated into claim 24] and 26-29 are withdrawn in view of the newly discovered reference(s) to DeReus

[US 6,876,482] and Zavracky [US 5,638,946]. Rejections based on the newly cited reference(s) follow.

Claims 1-6 and 38 are allowed.

Claim 30 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: Claim 1, the prior art of record does not teach nor suggest, in the claimed combination, a temperature independent microscopic switch with a conductive beam suspended from an anchor to a substrate, and at least one tether, with on end attached to a fixed location and the other end attached to the conductive beam away from the anchor.

Response to Arguments

Applicant's arguments with respect to claim 24-29 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BERNARD ROJAS whose telephone number is (571)272-1998. The examiner can normally be reached on M and W-F, 5:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin G. Enad can be reached on (571) 272-1990. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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